CONTENTS

1. Introduction 13
1.1. Geographical and chronological frameworks 14
1.1.1. Geographical frameworks 14
1.1.2. Chronological frameworks 14

2. History of research 17
2.1. Historical outline of social archaeology 17
2.2. Research history of the Late Neolithic in Eastern Hungary 19
2.3. The history of social archaeology researching the Late Neolithic in Eastern Hungary 21

3. Theory and methods of social archaeology 23
3.1. Types of social organisation and models of society 23
3.2. The emergence of social inequality 28
3.3. Power, social status, prestige 29
3.4. Possible traces of social inequality in archaeology 30
3.4.1. Traces of social inequality in the material culture 31
3.4.2. Traces of social inequality in settlements 35
3.4.3. Methods of mortuary analysis 38
3.4.3.1. Introduction 38
3.4.3.2. Theoretical (and epistemological) approaches 39
Culture-historical approach 39
Processual approach 39
Cognitive and postprocessual approach 40
3.4.3.3. Age-related differences in mortuary practices 41
3.4.3.4. Gender-related differences in mortuary practices 43
3.4.3.5. The question of demographic representativeness 44
3.4.3.6. The research of social inequality 46
3.4.3.7. The research of horizontal social differences 47
3.4.3.8. The use of statistical methods in the analysis of prehistoric cemeteries 49
Cluster analysis 51
Factor analysis and principal component analysis 51
Seriation 52
Correspondence analysis 52
3.4.3.9. Methods of mortuary analysis applied during processing 53

4. Social archaeological analysis of Eastern Hungarian Late Neolithic burials 55
4.1. Aszód-Papi földek 55
4.1.1. History of research 55
4.1.2. Geographical location of the site 55
4.1.3. Position of the graves within the site 56
4.1.3.1. Relation of burials with settlement features 56
4.1.3.2. Relation of the graves with each other 56
4.1.4. Anthropological data 57
4.1.4.1. Age and sex distribution 57
4.1.4.2. Demography 58
4.1.5. Ritual characteristics 60
4.1.5.1. Burial rites 60
4.1.5.2. Depth, form and size of grave pits 62
4.1.5.3. Orientation of the graves 64
4.1.5.4. Positioning of the corpse 67

4.1.6. Grave goods . . . 69
4.1.6.1. Burials without grave goods . . . 69
4.1.6.2. Pottery . . . 70
Pottery typology. . . . 73
Evaluation of the pottery . . . 98
4.1.6.3. Stone artefacts . . . 104
Polished stone tools . . . 104
Chipped stone tools. . . . 106
Stone beads . . . 107
4.1.6.4. Shell ornaments . . . 108
4.1.6.5. Copper . . . 110
4.1.6.6. Artefacts, ornaments and tools made of animal bone . . . 111
4.1.6.7. Ochre . . . 112
4.1.6.8. Grave good combinations . . . 113
4.1.7. Evaluation . . . 118
4.1.7.1. Age- and gender-related differences in Aszód-Papi földek . . . 118
4.1.7.2. Traces of horizontal social differences and social inequality in Aszód-Papi földek . . . 120
4.2. Békés-Povád . . . 123
4.2.1. History of research . . . 123
4.2.2. Geographical location of the site . . . 123
4.2.3. Position of the graves within the site . . . 123
4.2.4. Anthropological data . . . 123
4.2.5. Ritual characteristics . . . 124
4.2.6. Grave goods . . . 124
4.2.7. Chronology . . . 124
4.3. Berettyóújfalu-Herpály . . . 125
4.3.1. History of research . . . 125
4.3.2. Geographical location of the site . . . 125
4.3.3. Position of the graves within the site . . . 125
4.3.3.1. Relation of burials with settlement features . . . 125
4.3.3.2. Relation of the graves with each other . . . 126
4.3.4. Anthropological data . . . 126
4.3.5. Ritual characteristics . . . 126
4.3.6. Grave goods . . . 127
4.3.7. Chronology . . . 127
4.3.8. Evaluation . . . 127
4.4. Bodrogkeresztúr-Kutyasor . . . 128
4.5. Bodrogzsadány/Sárazsadány-Akasztószer . . . 128
4.6. Čičarovce . . . 129
4.6.1. History of research . . . 129
4.6.2. Position of the graves within the site . . . 129
4.6.3. Ritual characteristics . . . 129
4.6.4. Grave goods . . . 129
4.6.4.1. Pottery . . . 129
4.6.4.2. Stone tools. . . . 130
4.6.4.3. Copper . . . 130
4.6.4.4. Artefacts and tools made of animal bone . . . 130
4.6.5. Evaluation . . . 130
4.7. Čoka /Csóka/-Kremenyák . . . 131
4.7.1. History of research . . . 131
4.7.2. Geographical location of the site . . . 131
4.7.3. Position of the graves within the site . . . 131
4.7.4. Anthropological data . . . 131
4.7.5. Ritual characteristics . . . 132

4.7.6. Grave goods . . . 132
4.7.6.1. Bone tools and ornaments . . . 132
4.7.6.2. Stone tools and ornaments . . . 132
4.7.6.3. Shell ornament . . . 132
4.7.6.4. Ochre . . . 132
4.7.7. Chronology . . . 133
4.8. Hódmezővásárhely-Kökénydomb . . . 133
4.8.1. History of research . . . 133
4.8.2. Geographical location of the site . . . 133
4.8.3. Relation of burials with settlement features . . . 133
4.8.4. Anthropological data . . . 133
4.8.5. Ritual characteristics . . . 134
4.8.6. Grave goods . . . 134
4.8.6.1. Pottery . . . 134
4.8.6.2. Stone tools . . . 134
4.8.6.3. Shell and animal tooth ornaments . . . 135
4.8.6.4. Ochre . . . 135
4.9. Karancsság . . . 135
4.10. Kenézlő-Szérűskert . . . 135
4.11. Kisköre-Gát . . . 136
4.11.1. History of research . . . 136
4.11.2. Position of the graves within the site . . . 136
4.11.3. Anthropological data . . . 136
4.11.3.1. Age and sex distribution . . . 136
4.11.3.2. Demography . . . 138
4.11.4. Ritual characteristics . . . 138
4.11.4.1. Burial rites . . . 138
4.11.4.2. Orientation of the graves . . . 138
4.11.4.3. Positioning of the corpse . . . 139
4.11.5. Grave goods . . . 139
4.11.5.1. Pottery . . . 139
4.11.5.2. Stone tools and ornaments . . . 140
4.11.5.3. Shell and animal tooth ornaments . . . 141
4.11.5.4. Animal bones . . . 142
4.11.5.5. Ochre . . . 143
4.11.6. Chronology . . . 143
4.11.7. Evaluation . . . 143
4.12. Ószentiván . . . 144
4.13. Öcsöd-Kováshalom . . . 144
4.13.1. History of research . . . 144
4.13.2. Geographical location of the site . . . 145
4.13.3. Position of the graves within the site . . . 145
4.13.3.1. Relation of burials with settlement features . . . 145
4.13.3.2. Relation of the graves with each other . . . 145
4.13.4. Anthropological data . . . 146
4.13.5. Ritual characteristics . . . 146
4.13.5.1. Burial rite . . . 146
4.13.5.2. Orientation of the graves . . . 147
4.13.5.3. Positioning of the corpse . . . 147
4.13.6. Grave goods . . . 147
4.13.6.1. Pottery . . . 148
4.13.6.2. Figurine . . . 148
4.13.6.3. Stone tools . . . 148
4.13.6.4. Shell ornaments . . . 149
4.13.6.5. Bone artefacts and red deer canines . . . 149

4.13.6.6. Faunal remains ... 149
4.13.6.7. Ochre ... 149
4.13.7. Chronology ... 150
4.13.8. Evaluation ... 150
4.14. Szeghalom-Kovácshalom ... 151
4.15. Szegvár-Tűzköves ... 151
4.15.1. History of research ... 151
4.15.2. Position of the graves within the site ... 152
4.15.3. Anthropological data ... 152
4.15.4. Ritual characteristics ... 153
4.15.5. Grave goods ... 153
4.15.5.1. Pottery ... 153
4.15.5.2. Stone tools and ornaments ... 153
4.15.5.3. Bone tools and hairpin ... 153
4.15.5.4. Red deer canines ... 153
4.15.5.5. Copper beads ... 153
4.15.5.6. Wild boar mandible, faunal remains ... 154
4.15.5.7. Clay bead ... 154
4.15.5.8. Ochre ... 154
4.15.6. Chronology ... 154
4.15.7. Evaluation ... 154
4.16. Szerencs-Taktaföldvár ... 154
4.17. Tápé-Lebő A (Felső-halom) and B (Alsó-halom) ... 155
4.17.1. Research history ... 155
4.17.2. Geographical location of the site ... 155
4.17.3. Position of the graves within the site ... 155
4.17.4. Ritual characteristics ... 156
4.17.4.1. Burial rite ... 156
4.17.4.2. Orientation of the graves ... 156
4.17.4.3. Positioning of the corpse ... 156
4.17.5. Grave goods ... 157
4.17.5.1. Pottery ... 157
4.17.5.2. Stone tools and beads ... 158
4.17.5.3. *Spondylus* beads ... 158
4.17.5.4. Copper beads ... 158
4.17.5.5. Bone tools ... 158
4.17.5.6. Ochre ... 158
4.17.6. Chronology ... 159
4.17.7. Evaluation ... 159
4.18. Vésztő-Mágor ... 159
4.18.1. History of research ... 159
4.18.2. Position of the graves within the site ... 160
4.18.3. Anthropological data ... 160
4.18.4. Ritual characteristics ... 162
4.18.4.1. Coffins ... 163
4.18.5. Grave goods ... 163
4.18.5.1. Pottery ... 164
4.18.5.2. Stone tools and ornaments ... 164
4.18.5.3. Bone hairpin ... 164
4.18.5.4. Ochre ... 164
4.18.6. Chronology ... 165
4.18.7. Evaluation ... 165
4.19. Comprehensive evaluation of Eastern Hungarian Late Neolithic burials ... 166
4.19.1. General characteristics ... 167
4.19.1.1. Burial rites ... 167

4.19.1.2. Orientation of the graves . . . 168
4.19.1.3. Coffins . . . 169
4.19.1.4. Ochre . . . 170
4.19.1.5. Grave goods . . . 170
4.19.2. Age- and gender-specific differences of mortuary practices . . . 172
4.19.2.1. Anthropological data, demography . . . 172
4.19.2.2. Age- and/or gender-specific elements of mortuary practices . . . 174
4.19.2.3. Age- and gender-specific grave offering practices . . . 177
4.19.3. Traces of horizontal social differences and social inequalities on burials . . . 179
4.19.3.1. Location of graves, grave groups . . . 179
4.19.3.2. Traces of horizontal social differences and/or social inequality on certain elements of burial practices . . . 179
4.19.3.3. Traces of horizontal social differences on grave offering practices . . . 180
4.19.3.4. Traces of social inequality on costume elements and grave goods (prestige and status goods) . . . 180
4.20. A comparative study of the Eastern Hungarian Late Neolithic burials and the graves of Polgár-Csőszhalom . . . 185
4.21. A comparative study of Eastern Hungarian Late Neolithic burials and Transdanubian graves of the Lengyel complex . . . 187
4.21.1. General characteristics . . . 188
4.21.1.1. Burial rites . . . 188
4.21.1.2. Orientation of the graves . . . 189
4.21.1.3. Positioning of the corpse . . . 189
4.21.1.4. Graves without grave goods . . . 189
4.21.1.5. Pottery . . . 189
4.21.1.6. Grinding stones . . . 190
4.21.1.7. Chipped stone tools . . . 190
4.21.1.8. Flat axes, chisels . . . 190
4.21.1.9. Bone tools . . . 190
4.21.2. Traces of social differences . . . 191
4.21.2.1. Anthropological data, demography . . . 191
4.21.2.2. Funerary structures . . . 191
4.21.2.3. Status goods . . . 192
4.21.2.4. Prestige goods . . . 192
4.21.2.5. Children's grave goods . . . 194
4.21.3. Evaluation . . . 194

5. Prestige and status goods . . . 199
5.1. Shell ornaments *(Spondylus, Glycymeris, Dentalium)* . . . 199
5.1.1. *Spondylus gaederopus* . . . 199
5.1.1.1. Early Neolithic . . . 199
5.1.1.2. Middle Neolithic . . . 199
5.1.1.3. Late Neolithic . . . 201
5.1.1.4. Manufacturing techniques . . . 202
5.1.1.5. The question of the origin of *Spondylus* ornaments . . . 204
5.1.1.6. The question of the place of manufacturing *Spondylus* ornaments . . . 205
5.1.1.7. Evaluation of Eastern Hungarian Late Neolithic burials with *Spondylus* grave goods . . . 206
5.1.2. *Glycymeris glycymeris* . . . 207
5.1.3. *Dentalium vulgare* . . . 208
5.1.4. Evaluation . . . 208
5.2. Copper . . . 210
5.2.1. Early Neolithic . . . 210
5.2.2. Middle Neolithic . . . 212
5.2.3. Late Neolithic . . . 213
5.2.4. The question of the origin of copper raw material . . . 217

5.2.5. Technology of copper production ... 219
5.2.6. Evaluation ... 221
5.3. Red deer canines ... 223
5.4. Wild boar tusks ... 226
5.5. Stone artefacts ... 230
5.5.1. Polished stone tools ... 230
5.5.1.1. Maceheads ... 231
5.5.2. Chipped stone tools ... 232
5.6. Pottery ... 232

6. Possible traces of social inequality in Eastern Hungarian Late Neolithic settlements ... 235
6.1. Introduction ... 235
6.2. Buildings ... 235
6.3. Type and internal structure of settlements ... 238
6.4. Settlement pattern and settlement hierarchy ... 243
6.5. Evaluation ... 244

7. The traces of social inequality in material culture and rituals ... 247
7.1. Introduction ... 247
7.2. Hoards, offering assemblages ... 248
7.3. Representations ... 252
7.4. Evaluation ... 254

8. Summary ... 255

9. References ... 263

10. Maps
1. Late Neolithic grave groups in Aszód-Papi földek ... 298
2. Spatial distribution of male, female and child graves in Aszód-Papi földek ... 300
3. Spatial distribution of burials by age-at-death categories in Aszód-Papi földek ... 302
4. Spatial distribution of burial rites in Aszód-Papi földek ... 304
5. Spatial distribution of different orientations of the graves in Aszód-Papi földek ... 306
6. Spatial distribution of burials without grave goods in Aszód-Papi földek ... 308
7. Amphora and bottle-type vessels in the graves excavated in Aszód-Papi földek ... 310
8. Pedestalled bowls in the graves excavated in Aszód-Papi földek ... 312
9. Painted bowls in the graves excavated in Aszód-Papi földek ... 314
10. Bowl types in the graves excavated in Aszód-Papi földek ... 316
11. Cups with conical neck in the graves excavated in Aszód-Papi földek ... 318
12. Cups with conical neck in the graves excavated in Aszód-Papi földek ... 320
13. Cup types in the graves excavated in Aszód-Papi földek ... 322
14. Cup types in the graves excavated in Aszód-Papi földek ... 324
15. Tumbler types and zoomorphic vessel in the graves excavated in Aszód-Papi földek ... 326
16. Pot types in the graves excavated in Aszód-Papi földek ... 328
17. Large beakers and miniature vessels in the graves excavated in Aszód-Papi földek ... 330
18. Main pottery types in the graves excavated in Aszód-Papi földek ... 332
19. Polished stone tools in the graves excavated in Aszód-Papi földek ... 334
20. Stone tools in the graves excavated in Aszód-Papi földek ... 336
21. Shell, stone and animal tooth ornaments in the graves excavated in Aszód-Papi földek ... 338
22. Spatial distribution of graves rich in *Spondylus* ornaments and wild boar tusk pendants and/or mandible in Aszód-Papi földek ... 340
23. Artefacts made of animal bone or tooth in the graves excavated in Aszód-Papi földek ... 342
24. Ochre in the graves excavated in Aszód-Papi földek ... 344
25. Spatial distribution of male, female and child graves in Kisköre-Gát ... 346

26. Spatial distribution of burials by age-at-death categories in Kisköre-Gát 347
27. Spatial distribution of extended and crouched inhumations in Kisköre-Gát 348
28. Spatial distribution of different orientation of the graves in Kisköre-Gát 349
29. Spatial distribution of burials without grave goods in Kisköre-Gát 350
30. Spatial distribution of pottery in the graves excavated in Kisköre-Gát 351
31. Chipped stone tools and stone beads in the graves excavated in Kisköre-Gát 352
32. Shell ornaments, red deer canines and clay beads in the graves excavated in Kisköre-Gát 353
33. Spatial distribution of graves containing ochre in Kisköre-Gát 354
34. Relations of the graves with settlement features in Öcsöd-Kováshalom 355
35. Spatial distribution of male, female and child graves in Öcsöd-Kováshalom 356
36. Spatial distribution of burials by age-at-death categories in Öcsöd-Kováshalom 357
37. Spatial distribution of scattered cremations in Öcsöd-Kováshalom 358
38. Spatial distribution of different orientation of the graves in Öcsöd-Kováshalom 359
39. Spatial distribution of burials laid on their right or left side in Öcsöd-Kováshalom 360
40. Spatial distribution of burials without grave goods in Öcsöd-Kováshalom 361
41. Spatial distribution of burials with pottery in Öcsöd-Kováshalom 362
42. Spatial distribution of burials with stone tools in Öcsöd-Kováshalom 363
43. Spatial distribution of burials with ornaments in Öcsöd-Kováshalom 364
44. Spatial distribution of burials with bone tools and animal bone in Öcsöd-Kováshalom 365
45. Spatial distribution of burials with ochre in Öcsöd-Kováshalom 366